REMARKS

In view of both the amendments presented above and the following discussion, the Applicants submit that, given their claims as they presently stand, their specification fully satisfies the requirements of 35 USC § 112 and none of those claims is obvious under the provisions of 35 USC § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, the Examiner should telephone Mr. Peter L. Michaelson, Esq. at (732) 542-7800 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Status of claims

Each of claims 5-8 has each been amended to provide enhanced clarity.

No claim has been canceled or added.

Specification amendments

For enhanced understanding, various specification amendments have been made. As these amendments relate to matters of form, none of these amendments introduces any new matter into the specification.

Specification and objections to prior amendment

The Examiner objected to the Applicants' specification as apparently being non-enabling for various claim recitations. Along those lines, the Examiner objected to various amendments to claim 5, which the Applicants made by their prior amendment filed June 14, 2006 (mailed May 22, 2006), under the provisions of 35 USC § 132(a) as adding new matter into the disclosure.

Specifically, the Examiner pointed to the following recitations which he believed found no support in the original disclosure:

> "A hierarchically-structured ...
> ...
> "a coordinating sub-system comprising at least one coordination processor for mutual coordination of actions of said personal service agents for different ones of the users;
> wherein, in order to control flow of user information amongst all the personal agents, the personal agents for different ones of the users only communicate with each other through their corresponding ones of the personal service agents, and the personal service agents associated with all of the personal agents only communicate amongst themselves through the coordinating sub-system".

Upon careful review of the specification and the claims, it became apparent to the Applicants that, for enhanced clarity, various claim recitations should be amended:

(a) "personal agent sub-system" should be "personal assistant sub-system"; and

(b) "personal agents" should be "personal assistants".

Those amendments have now been made.

While all the original terms find complete functional support in the specification, the Applicants readily concede that the terms "personal agent" and "personal service agent", owing to their high degree of similarity, may well have caused unintentional confusion. Hence, the Applicants have also amended their specification to recite "personal assistant" as being synonymous with "personal agent" and, for clarity, have also referred to the former, where appropriate, rather than the latter at various instances in the specification and in their claims.

The Applicants have also amended claim 5 such that while it recites the hierarchical nature of the communication, it does not exclude direct communication between personal assistants and/or between personal service agents. The latter, as discussed below and in page 11, lines 2-14 [within paragraph 37] of the present specification, provides a pathway for these assistants and/or agents for different users to directly exchange learning information amongst themselves, and/or certain specified user information relevant to an assigned task (and importantly for which prior user permission has been provided -- as the specification notes in page 12, lines 11-31 [paragraph 41]). To the extent Applicants in any of their prior amendments indicated otherwise, i.e., that under all conditions the path for all communications was solely through the entire hierarchy, the Applicants were incorrect and regret their error, and now retract all such erroneous statements. Of course, if a user has not authorized his(her) user information to be exchanged directly between assistants or between personal service

agents, then, at least for that user, user communication will only flow hierarchically through the system.

The present invention provides an agent-based system where user communication flows through a strict sub-system hierarchy that employs fixed rules of communication and restricted task assignment.

A personal assistant (also "personal agent"; the assistant is implemented as an software agent -- see page 8, lines 21-25 [paragraph 31] of the present specification; all ensuing references hereinafter to the specification are to the substitute specification filed with Applicants' prior amendment mailed October 14, 2005 and as subsequently amended by the Applicants' preliminary amendment mailed on May 22, 2006) is associated with each different user. A 1:1 correspondence exists between each user and his(her) personal assistant, and each user only communicates with his(her) personal assistant. Each personal assistant interacts with one or more personal service agents, solely associated with that particular assistant, and with no other personal service agents. The personal service agents perform specific specialized sub-tasks only for and communicate with that particular personal assistant. See, e.g., page 2, line 27 et seq and page 4, line 15 et seq. Hence, each personal assistant and personal service agent only operate for its associated user, and no other.

Each personal service agent also communicates with a coordination processor (also referred in the specification as a "processor part") within a coordinating (processing) sub-system. Inter-agent communication (aside from learning

information and/or certain specified task-related information, for which as to the latter prior user permission has been provided) only occurs through this sub-system with the resulting communication being routed by these personal service agents to their associated personal assistants.

For example, as shown in FIG. 1, the inventive personal agent system may illustratively contain four different personal assistants (personal agents) 11-14. Each of these assistants is associated with only one corresponding individual user. Each user can access his(her) corresponding assistant through PC 60 (or any of PCs 60' used in a networked environment shown in FIG. 2). Each of these personal assistants interacts with one or two associated personal service agents within environments 30 and 40. As shown, personal assistants 11 and 12 interact with personal service agents 31 and 21, and 22 and 32, respectively; personal assistant 13 interacts just with personal service agent 23 in environment 20, and personal assistant 14 interacts just with personal service agent 34 in environment 30. Each of personal service agents 20, illustratively agents 21-23, may be a personal secretary agent which provides a secretarial function for its associated user; while each of agents 30, such as agents 31-32 and 34, may be a traveling agent which makes travel arrangements for its associated user. Each personal assistant passes on orders from its associated individual user, but no one else, to its associated personal service agent(s) based on the needs of that user and instructs that personal service agent to undertake a corresponding sub-task, i.e., perform a given secretarial task, or arrange

a meeting with another user. Because each personal assistant and each personal service agent, by virtue of the fixed and strict hierarchy there between, do not handle tasks for multiple users, confidential information for one user is not likely to be exchanged with any other user, thus restricting user information flow within the entire personal agent system. This, in turn, significantly heightens security over that provided by traditional agent-based systems. Moreover, each personal assistant and its associated personal service agent(s) do not ordinarily communicate with any other such assistant or agent (aside from, in an modified embodiment of the invention, sharing learning information or specific user-approved information), but only through a neutral process (coordinating sub-system), such as processing part (coordination processor) 41, which coordinates the actions of all the personal service agents, including information exchange there between, for tasks that ultimately involve multiple users. Consequently, inter-agent communication, within the system, is significantly reduced over that which would occur in traditional agent-based systems, hence advantageously reducing network traffic. This, in turn, significantly simplifies the programming of each such agent over that heretofore required in the art.

Now, with that in mind, the specification repeatedly provides clear, explicit and unambiguous support for the hierarchical communication methodology recited in claim 5 as it now stands -- the hierarchical communication also being clearly shown in the drawings.

Claim 5 now recites:

"A hierarchically-structured personal agent system within a computer system, the personal agent system comprising:

a personal assistant sub-system having a plurality of personal assistants, each one of said personal assistants being arranged to perform tasks for one different user in a plurality of users;

at least one service agent sub-system comprising a plurality of personal service agents, each one of said personal service agents being arranged for carrying out a specific sub-task for an associated one of said personal assistants and for only the associated one of said users who is served by said associated one personal assistant; and

a coordinating sub-system comprising at least one coordination processor for mutual coordination of actions of said personal service agents for different ones of the users;

wherein, in order to restrict flow of user information within the personal agent system, said one user only communicates with said one of the personal assistants, the personal assistants for different ones of the users communicate through their corresponding ones of the personal service agents, and the personal service agents associated with all of the personal assistants communicate amongst themselves through the coordinating sub-system."

The basic hierarchical approach, recited in the claim, of each different user solely communicating with his(her) corresponding personal assistant, on a 1:1 basis, which, in turn, communicates with an associated personal service agent(s) and those agents communicating through coordination processors (processing parts), is expressly described on page 2, line 27 through page 3, line 22 [paragraphs 11 and 12] of the present specification, as follows:

"To overcome these and other drawbacks of the prior art, the system according to the invention comprises a personal agent sub-system comprising a plurality of personal assistants, each personal assistant being arranged to perform tasks for only one single user. Moreover the system according to the invention comprises at least one service agent sub-system, comprising a plurality of personal service agents, each personal service agent being arranged for carrying out a specific sub-task for the user, and each personal service agent being connected to one of the personal assistants. Finally, the system according to the invention comprises a coordinating sub-system, comprising one or more coordination processors for mutual coordination of actions of the personal service agents of different users.

In this way, the inventive system provides for a regular and efficient architecture offering a much better controllability of the agents. Each user only communicates directly with his/her personal assistant, which subsequently passes on orders from the user to the relevant personal service agent and vice versa. In addition, problems regarding unreliable third parties are avoided since the personal assistant and the personal service agents of a user exclusively operate for their own user. Since interaction with agents of third parties does not take place directly, but by way of a neutral processor, it is avoided that confidential information is inadvertently exchanged."

The hierarchical communication is clearly depicted in Figure 1 and described in accompanying portions of the present specification, e.g., page 4, line 23 through page 5, line 19 [paragraphs 20-23] as follows:

"For a user, his own personal assistant is the only means by which he may utilize the system 1. The personal assistants are therefore arranged to communicate with their own respective users, e.g., to receive orders or to pass on information obtained to the users. In addition, the personal assistant is arranged for communication with personal service agents to be discussed below, e.g., for passing on orders to, or receiving results from, the personal service agents.

> In this example, there are two personal service-agent environments present, arranged as a secretary environment 20 having personal secretary agents in the form of secretaries 21, 22, 23 and, as a personal travelling-agent environment having travelling agents 31, 32 and 34. Personal service agents, such as the travelling agents and secretaries referred to above, operate exclusively for a single user. To achieve this, the personal service agents are connected to the personal assistant of their own user. Having said this, the invention is not limited to application with two service-agent environments; any number of service-agent environments may be chosen.
>
> The processing-part environment 40 is provided with a processing part (coordination processor) in the form of an appointment maker 41. The appointment maker 41 is arranged for processing, based on data as supplied by a personal service agent such as, e.g., a secretary agent and, if necessary, making contact with other personal service agents. In this connection, the data of the personal service agents is treated confidentially. The appointment maker 41 is referred to by way of example of a processing part, and the invention is also applicable with other processing parts."

The 1:1 nature of each user communicating through only one personal assistant is again noted on page 5, line 31 through page 6, line 7 [paragraph 24] as follows:

> "A user is always provided with a personal assistant, since the communication with the personal agent system takes place by way of the personal assistant. In addition, each user is provided with at least a personal service agent, but the user does have the choice of the personal service agent(s) he prefers to use. Since the user chooses the functions required by him, there occur no unused elements in the system. As a result, the system is kept as small as possible, and therefore operates efficiently."

Further, the specification notes that each of the personal assistants and/or personal service agents may include a self-learning module, with learning information

being communicated, i.e., exchanged, directly between personal assistants, or between personal service agents. In addition, the personal service agents may directly exchange certain specific user information but only to the extent the associated user has previously provided his(her) permission to do so. In that regard, see page 11, line 23 through page 12, lines 31 [paragraphs 39-41]. Of course, if the user has not authorized his(her) user information to be exchanged in that fashion, then that, at least for that user, communication of information for that user will only flow hierarchically through the system.

In view of the above, the Applicants submit that claim 5 is fully supported by disclosure set forth in the specification, as filed, including the drawings. Accordingly, claim 5 as it currently stands contains no new matter. Thus, the specification is fully compliant with the requirements of 35 USC § 112.

The objection to the specification should now be withdrawn.

Rejection under 35 USC § 103

The Examiner rejected claims 5-8, as they stood immediately prior to this amendment, as being obvious under the provisions of 35 USC § 103 in view of the teachings of the Yates et al application (International published patent application number WO 96/25012) taken with those of the Sycara et al publication (K. Sycara et al, *Coordination of Multiple Intelligent software Agents*, International Journal of Cooperative Information Systems, Vol. 5, Nos. 2-3,

June-September 1996, pages 181-211). The Applicants have now amended independent claim 5. To expedite prosecution, the Applicants will discuss this rejection principally in the context of claim 5, as it now stands. In that context this rejection is respectfully traversed.

Specifically, the Examiner takes the position that various elements recited in claim 5, as that claim previously stood, are disclosed in the Yates et al application. To support his position, the Examiner states "Yates teaches a service provision system for use in providing information services over one or more communication networks, has a software infrastructure divided into domains (101, 103, 104, 106.) Each domain has an intelligent software agent (102, 107, 109, 100) and this community of agents sits in a computing environment represented in each domain by a DPE kernel (105)." The Examiner concedes that that application fails to disclose the claimed feature of "in order to control flow of user information amongst all the personal agents, the personal agents for different ones of the users only communicate with each other through their corresponding ones of the personal service agents, and the personal service agents associated with all of the personal agents only communicate amongst themselves through the coordinating subsystem". Given that omission, the Examiner turns to the Sycara et al publication, specifically its teachings of a collaborative InfoAgent 2 which the Examiner opines "plays the role of the coordination subsystem of the present invention". With all these teachings in mind, the Examiner concludes that it would have been obvious for one of skill in the art to have modified the agent system taught by the Yates et al

application to include the coordination feature taught by the Sycara et al publication and thus arrive at the invention as then recited in prior claim 5. The Examiner opines that alleviating a "problem of locating information sources, accessing, filtering and integrating information in support of decision making, as well as coordinating information retrieval and problem solving efforts of information sources and decision-making systems" would apparently have motivated that person of skill to have made this modification.

The Examiner's conclusion, when viewed in the context of claim 5, as it currently stands amended, is incorrect.

As previously discussed in their prior amendments and above, the Applicants recognize in pages 1 and 2 of their specification that traditional agent-based systems suffer various drawbacks.

In particular, given that such agents maintain mutual contact through a computer network, such inter-agent communication tends to impart a significant burden on a network. Furthermore, to implement such communication and other related functionality, such as mutual co-operation with other agents, each agent tends to be functionally rather extensive and, as such, implemented through a complex computer program. Moreover, a particularly important drawback, namely a security risk, arises from the fact that the agents tend to share information amongst themselves and are each free to communicate with a variety of different actors (including humans). By virtue of such unrestrained

inter-agent communication through which information is typically freely shared amongst different agents, confidential information belonging to or concerning one user may well be provided to another user, thus breaching and possibly destroying the confidentiality of that information.

Advantageously, the present invention remedies these deficiencies by providing a strict hierarchical agent-based arrangement with fixed rules of communication. Specifically and as discussed in detail in the immediately prior section of this amendment, each user has his(her) own personal assistant and only communicates with that assistant. One or more personal service agents are associated with each one single individual user and no other, and communicate with the personal assistant for that user. The user does not directly communicate with any of his(her) agents. Each personal service agent performs specific sub-tasks only for its associated user and no other user. All the personal service agents for all users also communicate with a coordination processor (also referred to as a processing part), within a coordinating (processing) sub-system, through which information can be passed between various personal service agents of different users. Information flow, with one exception only occurs hierarchically through the entire system. The exception, as discussed above, is learning information and/or certain specified task-related user information (for which the associated users have previously provided their permission for their user information to be exchanged) which can be directly exchanged between different personal assistants or between personal service agents for different users. See,

e.g., page 2, line 27 et seq and page 4, line 29 et seq of the present specification.

The Yates et al application teaches a system for provisioning telecommunication information services over more than one communication network. To the extent relevant to the present invention, the system taught by the Yates et al application utilizes a multi-agent based software infrastructure where the agents are reconfigurable and reside in corresponding domains. See, e.g., col. 3, line 27 et seq of the Yates et al application. The domains effectively divide the infrastructure into certain areas which relate to various functional entities. See, e.g., page 7, line 8 et seq. As expressly discussed on page 4, line 6 et seq and page 9, line 7 et seq, each reconfigurable software agent may comprise or have access to a plurality of software modules; thus, the agent can reconfigure itself, at least in part, by invoking certain selected sets of those modules based on that agent having modified or substituted policies of objects which that agent may use. In that regard, a selected set of modules invoked by an agent can provide run-time realization of the service provision system, as determined by a particular agent configuration.

With reference to a specific implementation, the Yates et al application teaches in page 19, line 19 et seq and as shown in accompanying Figure 11, that two types of agents reside on a common computational node: terminal agent 102 and user agent 107. These agents are provided with data of various types, including user profiles stored within profile store 1103. These agents also have access to other data stores available through transport network 1100,

which include policies data store 1104 and management information data store 1105. Policy data store 1104, as explicitly stated on page 19, line 25 et seq, "allows a user access agent to reconfigure itself in order to change its response to user interactions." Management data store 1105 may provide global management information regarding services. Each computational node, such as that shown in Figure 11, included a DPE (distributed processing environment) kernel 811.

As described on page 22, line 17 et seq of the Yates et al application, a user agent represents and acts on behalf of a user. It receives requests from users to establish service sessions or join existing service sessions, and creates or negotiates with existing service sessions as appropriate. A user agent also receives and processes requests to join a service session from service sessions themselves. A user can be simultaneously involved with multiple service sessions; a service session can have one or more users associated with it. See, e.g., page 21, line 29 et seq.

As described on page 22, line 27 et seq, a terminal agent is responsible for representing a terminal, and specifically obtaining a precise location of a terminal.

In order for users to access a service, the Yates et al application teaches that users must first associate their user agents with terminal agents -- which occurs as part of a "log on" process. A user may be simultaneously associated with many terminals; similarly, a terminal may be simultaneously associated with many users. See, page 23,

line 1 et seq. It stands to reason that what this apparently means is that one user agent can be associated with many different terminal agents, and one terminal agent can be associated with many different user agents.

With this organization in mind, Figure 10 of the Yates et al application depicts a computational view of the access and session concepts. As is readily apparent, a user agent and a terminal agent both associated with a corresponding end user application -- through a log on procedure -- are directly accessed by and have direct access to that end user application, with both depicted end user applications being able to directly communicate with each other through a session there between and established through the agents and also the service and session communication managers connected to both user agents. In essence, this arrangement establishes a telecommunication link, such as a voice call, between the two depicted user applications.

There is simply no disclosure in the Yates et al application indicating that the information available to one user agent, such as agent 107 shown in Figure 11, for one user can not be freely shared with or communicated to the other user agent 107' for use by the other user. In fact, there appear to be no teachings whatsoever in the Yates et al application of any methodology that restricts the flow of information, let alone confidential user information, between individual agents. The system taught by that application simply has no provision to restrict inter-agent information flow -- in sharp contrast to that which the present Applicants now teach. Moreover, in light of the

fact that one user agent (terminal agent) can apparently be associated with multiple terminal agents (user agents), a significant potential exists that confidential user information can and will be disseminated by and shared amongst different agents.

The Yates et al application appears to be simply oblivious to the problem which the present Applicants address and advantageously solve -- namely recognizing that confidential user information is inadvertently communicated among agents in a traditional multi-agent system and how such a system can be modified to efficiently and effectively restrict, if not eliminate, all such inadvertent communication.

While the Examiner is certainly correct in noting that the Yates et al application discloses an agent-based system, the agents are not configured, as the present Applicants now teach, in a strict hierarchy. By virtue of using fixed rules of hierarchical communication, flow of user information is significantly limited between the personal service agents of different users so as to protect against dissemination of confidential user information. Specifically, as to the hierarchy, each user solely communicates with a single corresponding personal assistant and that assistant, in turn, communicates with, one or more personal service agents, with the assistant and personal service agents only serving that individual user and no other. The personal agents, in turn, can communicate with each other through a co-ordination processor. While different personal service agents can also exchange user information directly amongst themselves, the corresponding

users involved must provide their prior permission for such exchange; otherwise their user information only flows hierarchically through the entire system.

In that regard, as the Examiner can see from Figure 10 in the Yates et al application, the user and terminal agents (107 and 102, and 107' and 102') are not situated in a hierarchical arrangement, but rather here they are coincident, i.e., both agents are connected directly to their associated end user application. Obviously then, user information, whether confidential or otherwise, could readily flow between the agents. This stands in sharp contrast to the Applicants' hierarchical arrangement.

Contrary to the Examiner's view, the Yates et al application totally fails to disclose the hierarchical agent-based arrangement which the Applicants now teach and which claim 5 specifically recites, and particularly one in which *each user is exclusively served on a 1:1 basis by both a separate personal assistant and one or more personal service agents, with that user solely communicating with his(her) personal assistant and that personal assistant, in turn, communicating with the associated personal service agents*. Information flow between the personal service agents for different users occurs through and is coordinated by a coordination processor. The coordinator operates using predefined rules which define a so-called "social hierarchy" of, e.g., assistants and personal service agents, and, by so doing, specify which personal service agents can communicate with each other and what specific information can be passed from one to the other. See, e.g., page 6, line 28 et seq of the present specification. Granted, the present invention

also permits different personal assistants to directly exchange learning information, and for personal service agents for different users to do the same. Furthermore, these personal service agents can also directly exchange user information but only if the affected users have provided their prior permission to do so. Since the hierarchy prevents unnecessary communications and restricts the flow of confidential user information, it also provides the salutary result of reducing a load on the communications network.

Consequently, the Yates et al application simply stops well short of teaching the Applicants' present invention.

The Sycara et al publication teaches an approach for distributing a collection of intelligent software agents that cooperate asynchronously to perform goal-directed information retrieval and integrate information to support various decision-making tasks. Of particular interest, this approach uses multiple agents where, as expressly stated on page 183, third paragraph: the agents operate asynchronously and "collaborate with each other and their users." This collaboration, while it facilitates information transfer, presents the exact drawback which the Applicants' present invention remedies, namely inadvertent transfer of confidential user information amongst different agents.

As indicated in FIG. 1 (on page 186) and described in section 2.1, the approach taught by the Sycara et al publication relies on using three different types of agents: interface agents, task agents and information agent (Info

Agents). As described in section 2.1.1 on page 187 et seq, an interface agent: (1) collects relevant information from a user to initiate a task, (2) presents relevant information including results and explanations, (3) asks the user for additional information during problem solving, and (4) asks for necessary user confirmation. A task agent performs most of the autonomous problem solving, and specifically: (1) receives user delegated task specifications from an interface agent, (2) interprets those specifications and extracts problem solving goals, (3) forms plans to satisfy those goals, (4) identifies information seeking subgoals that are present in its plans, and (5) decomposes the plans and coordinates with appropriate task agents or information agents for plan execution, monitoring and result composition. An information agent primarily provides intelligent information services, including a one-shot retrieval of information in response to a query and constant monitoring of available information sources for occurrence of predefined information patterns. Each of these agents can possess a self-contained learning capability.

What is clearly depicted in FIG. 1 is the information flow between interface agents and task agents. Interface and task agents can exchange information with each other; each interface agent can communicate with multiple task agents and so forth. Information agents can apparently communicate with multiple task agents.

The Sycara publication teaches what appears to be unrestricted information flow occurring between the various agents which certainly aids in facilitating and expediting task execution, but can very easily cause unwanted

dissemination of confidential user information. By virtue of having unrestrained information flow across agents, this publication teaches directly away from the hierarchical approach taught by the Applicants.

Consequently, even if, as the Examiner surmises, that Info Agent taught by the Sycara et al publication coordinated communication among different agents, combining the teachings of the Yates et al application with those in the Sycara et al publication would yield an agent-based system that would still suffer the very same infirmities inherent in the system taught by the Yates et al application alone. The teachings in the Sycara et al publication simply do not address, let alone remedy, these infirmities.

Thus, the combined teachings, as do those of the Yates et al application alone, fail to disclose the hierarchical agent-based arrangement which the Applicants now teach and which claim 5 specifically recites, and particularly one in which *each user is exclusively served by both a separate personal assistant and also one or more personal service agents, with that user solely communicating with his(her) personal assistant and that personal assistant, in turn, communicating with the associated personal service agents*. Information flow between the personal service agents for different users occurs through and is coordinated by a coordination processor.

Independent claim 5 contains suitable recitations directed to the distinguishing aspects of the present invention. This claim recites as follows, with those recitations being shown in a bolded typeface.

"A hierarchically-structured personal agent system within a computer system, the personal agent system comprising:

a personal assistant sub-system having a plurality of personal assistants, each one of said personal assistants being arranged to perform tasks for one different user in a plurality of users;

at least one service agent sub-system comprising a plurality of personal service agents, **each one of said personal service agents being arranged for carrying out a specific sub-task for an associated one of said personal assistants and for only the associated one of said users who is served by said associated one personal assistant**; and

a coordinating sub-system comprising at least one coordination processor for mutual coordination of actions of said personal service agents for different ones of the users;

wherein, in order to restrict flow of user information within the personal agent system, said one user only communicates with said one of the personal assistants, the personal assistants for different ones of the users communicate through their corresponding ones of the personal service agents, and the personal service agents associated with all of the personal assistants communicate amongst themselves through the coordinating sub-system." [emphasis added]

Inasmuch as these distinguishing recitations are not shown, taught or disclosed by the teachings of the Yates et al application or the Sycara et al publication - whether those teachings are taken singly or in any combination, including that posed by the Examiner, then this claim is not rendered obvious by those teachings and hence is patentable there over under the provisions of 35 USC § 103.

Each of dependent claims 6-8 directly depends from claim 5 and recites further distinguishing aspects of the present invention. Consequently, each of these dependent

claims is also patentable, under the provisions of 35 USC § 103, over the teachings of the Yates et al application and Sycara et al publication for the same exact reasons set forth above with respect to claim 5.

Conclusion

Thus, the Applicants submit that, given their claims as they presently stand, their specification fully satisfies the requirements of 35 USC § 112 and none of those claims is obvious under the provisions of 35 USC § 103.

Consequently, the Applicants believe that all their claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,

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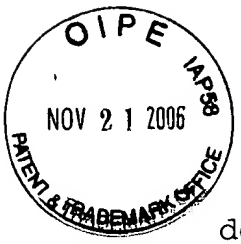

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